

ADDITIONAL NOTES ON THE ERIOCAULACEAE. XCIV

Harold N. Moldenke

PAEPALANTHUS KANAII Satake

Additional bibliography: Mold., *Phytologia* 54: 406, 1983.

Citations: MOUNTED ILLUSTRATIONS: Satake, *Journ. Jap. Bot.* 53: 107--111, fig. 1 & 2, 1978 (Ba--380878).

PAEPALANTHUS KARSTENII Ruhl.

Additional bibliography: Mold., *Phytologia* 41: 482--483 (1979), 42: 29 & 30 (1979), and 45: 296, 1980; Hocking, *Excerpt. Bot. A.* 35: 324, 1980; Mold., *Phytol. Mem.* 2: 110, 117, 129, 134, 175, 398, 400, 426, 428, & 614, 1980; Cleef, *Dissert. Bot.* 61: 160/161, 1981; Mold., *Phytologia* 50: 246, 1982.

Recent collectors describe this plant as a rhizomatous cushion-herb, growing in clumps, the "leaves grass-like with their edges inrolled and a few hairs on the inside face", the "flowering stalks" to 5 cm. tall but mostly shorter, the white heads to 5 mm. wide, the flowers tiny, the perianth white to grayish-white, the filaments white, and the anthers pale but turning darker in age. They have found it forming small patches in wet meadows and abundant of grass paramos, at 3000--3600 m. altitude, in flower in October and both in flower and fruit in May, July, August, and November.

The Cuatrecasas & Castaneda 25027 collection, cited below, was previously misidentified and cited as *Eriocaulon microcephalum* H.B.K.

Additional & emended citations: COLOMBIA: Boyacá: *Melampy* 228 (W--2916212). Cundinamarca: *Dwyer & Idrobo* 8189 (E--2773083); *Fosberg* 21684 (W--2109217); *Fosberg & Valencia* 21462 (W--2109115). Magdalena: *Cuatrecasas & Castañeda* 25027 (Fg, W--2339386); *White & Alverson* 642 (E--2720632, Ws). Santander: *Killip & Smith* 15626 (W--1351477). VENEZUELA: Mérida: *López-Figueiras & Rodríguez* 8857 (W--2932335). Táchira: *Luteyn, Lebrón-Luteyn, & Ruiz-Teran* 5927 (N). Trujillo: *Aristeguieta* 3598 (W--2882087). ECUADOR: Loja: *J. A. Hart* 1524 (W--2937031).

PAEPALANTHUS KARSTENII f. *COREI* (Mold.) Mold., *Phytologia* 45: 296, 1980.

Synonymy: *Paepalanthus karstenii* var. *corei* Mold., *Phytologia* 29: 386, 1974.

Bibliography: Mold., *Phytologia* 29: 386 (1974) and 30: 27--29, 1975; Hocking, *Excerpt. Bot. A.* 25: 380, 1975; Mold., *Phytologia* 33: 44--45 (1976), 35: 27 (1976), 41: 483 (1979), 42: 30 (1979), and 45: 296, 1980; Hocking, *Excerpt. Bot. A.* 35: 324, 1980; Mold., *Phytol. Mem.* 2: 110, 117, 175, & 614, 1980; Mold., *Phytologia* 50: 246, 1982.

Recent collectors describe this plant as a mat-forming herb, growing on marshy paramos, at 3375--3845 m. altitude, in flower in

May and September, the floral bracts described as brown. Luteyn and his associates refer to its occurrence as "scattered".

Additional & emended citations: Cundinamarca: Cuatrecasas 9502 in part (W--2847471); Dwyer & Idrobo 8186 (E--2773084); Kirkbride 363 (E--2773076, E--2773094); Luteyn & Lebron-Luteyn 7755 (W--2930077); Luteyn, Lebrón-Luteyn, Espina Z., & Palacios 7755 (N); Pennell 2256 (F--485508, N, W--1082205). Meta: Kirkbride & Idrobo 363 (E--2773093). VENEZUELA: Mérida: Steyermark 55727 (N, W--1901714). ECUADOR: Carchi: Boeke 803 (N). BOLIVIA: La Paz: G. H. H. Tate 382 (N).

PAEPALANTHUS KARSTENII var. *MINIMUS* Mold.

Synonymy: *Paepalanthus karstenii* f. *minimus* Mold., Phytol. Mem. 2: 614. 1980.

Additional bibliography: Mold., Phytologia 41: 483 (1979) and 42: 29. 1979; Mold., Phytol. Mem. 2: 110 & 614. 1980.

PAEPALANTHUS KARSTENII var. *SUBSESSILIS* (Mold.) Mold.

Additional bibliography: Mold., Phytologia 41: 483. 1979; Mold., Phytol. Mem. 2: 110, 117, 428, & 614. 1980.

López-Figueiras describes this plant as forming mats to 14 cm. in diameter and found it growing at 3300 m. altitude.

Additional citations: VENEZUELA: Lara: Liesner, González, Wingfield, & Burandt 8065 (Ld); Steyermark 55495 (W--1901710--iaotype). Mérida: López-Figueiras 8727 (W--2932361).

PAEPALANTHUS KILLIPII Mold.

Additional bibliography: Mold., Phytologia 37: 46. 1977; Mold., Phytol. Mem. 2: 110, 117, & 614. 1980.

Additional citations: COLOMBIA: Meta: Fosberg 19511 (W--2108249).

PAEPALANTHUS KLOTZSCHIANUS K&ern.

Additional bibliography: Mold., Phytologia 33: 46. 1976; Mold., Phytol. Mem. 2: 155, 426, 428, & 614. 1980.

Recent collectors have encountered this plant in the "interior sombrio da matinha do alto do morro", at 100--1220 m. altitude, in both flower and fruit in July. Mattos Silva & Brito encountered it in sandy soil of "mata raleada pelos extratores de fibras de piaçava"

Additional citations: BRAZIL: Bahia: Hatschbach & Guimaraes 42399 (Ld); Mattos Silva & Brito 972 (Ld). MOUNTED ILLUSTRATIONS: J. Hutchinson, Fam. Flow. Pl., ed. 3, [711], fig. 264. 1973 (Ld).

PAEPALANTHUS KUNHARDTII Mold.

Additional bibliography: Mold., Phytologia 30: 31. 1975; Mold., Phytol. Mem. 2: 117 & 614. 1980; Mold., Phytologia 54: 234. 1983.

Huber & Steyermark describe this plant as being 20--30 cm. tall, the heads dry, gray or dark-gray. They assert that it forms dense clumps, frequent in the grass of very dry and open fields, at 2200 m. altitude, in both flower and fruit in January and February.

Additional citations: VENEZUELA: Amazonas: Maguire & Politi 27588 (W--2046438--isotype). Bolívar: Huber & Steyermark 6971 (Ld), 7035 (Ld).

PAEPALANTHUS KUPPERI Suesseng.

Additional bibliography: Mold., *Phytologia* 35: 27. 1976; Mold., *Phytol. Mem.* 2: 81 & 614. 1980.

The *Weston 1537*, distributed as *P. kupperi*, seems, instead, to be *P. costaricensis* Mold.

PAEPALANTHUS LAMARCKII Kunth

Additional bibliography: Knuth, *Feddes Repert. Spec. Nov. Beih.* 43: [Init. Fl. Venez.] 180. 1927; Savage, *Cat. Linn. Herb. Lond.* 21. 1945; Anon., *Kew Bull. Gen. Ind.* 111 & 209. 1959; Mold., *Phytologia* 41: 483--484 (1979) and 42: 34. 1979; F. C. Seymour, *Phytol. Mem.* 1: 85. 1980; Mold., *Phytol. Mem.* 2: 74, 76, 84, 90, 92, 96, 104, 110, 117, 122, 124, 126, 155, 172, 207--209, 216, 220, 227, 229, 250, 357, 401, 404, 426, & 614. 1980; Mold., *Phytologia* 50: 242 (1982) and 54: 269. 1983.

Recent collectors have found this plant growing in open sites on sandy savannas, "in sand beside water", on slightly elevated sites with and under *Byrsonima* on wet savannas, in "open pastures and fields on level areas in valleys with natural swampy depressions", at lake margins, in shallow moist depressions, and on laterite in open places in forests, at 50--300 m. altitudes, in both flower and fruit from June to August and in November and December, in flower also in January. They describe it as a diminutive herb, 5--8 cm. tall, the inflorescence heads gray or "greenish-whitish-gray". Delascio and his associates refer to the "cabezuelas blancas", but I have never seen any that appeared to be white.

Seymour (1980) lists the species from Nicaragua, but cites no collections. Knuth (1927) cites *Otto s.n.* from Bermudez and *Chaffanjon 114* and *Passarge & Selwyn 309 & 576* from Bolívar, Venezuela.

Material of *P. lamarckii* has been misidentified and distributed in some herbaria as the very similar *P. cearaensis* Ruhl. On the other hand, the *Hallé 454*, so distributed, actually is *P. fasciculatus* (Rottb.) Körn., while *Granville 1409* and *Sastre 1500* are *P. leucocyaneus* f. *egleri* Mold. and *Raynal-Roques 20121* is *Syngonanthus caulescens* (Poir.) Ruhl. *C. Wright 3234* is a mixture with *P. seslerioides* Griseb., while *Schultes & Cabrera 14968* is a mixture with *P. fasciculatus* f. *tenellus* Herzog and *Syngonanthus caulescens* (Poir.) Ruhl.

Additional citations: BELIZE: Bartlett 11263 in part (W--1493358). HONDURAS: Colón: Saunders 968 (Ld). COLOMBIA: Magdalena: Haught 2241 (W--1706916). Vaupés: Schultes & Cabrera 14968 in part (W--2198877). VENEZUELA: Amazonas: O. Huber 1034 (Ld), 1045 (Ld), 2145 (Ld), 5620 (Ld), 5717 (Ld); Maguire, Cowan, & Wurdack 29499 (W--2046477); Maguire, Wurdack, & Bunting 36138 (W--2168969); Steyermark 58447 (W--1901774); Thomas & Rogers 2566 (Ld). Bolívar: Steyermark 90849 (W--2430198); Wurdack & Monachino 39950 (W--2223430). Guárico: Delascio, Montes, & Davidse 11093 (E--2993681),

11198 (Ld), 11297 (Ld). Táchira: Steyermark & Liesner 119320 (Ld). GUYANA: Maas, Westra, & al. 3778 (Ld, N). SURINAM: Maguire, Schulz, Soderstrom, & Holmgren 53960 (W--2514873). FRENCH GUIANA: Leeuwenberg 11644 (Cy, N); Raynal-Roques AR.20200 (Cy); Tucker s.n. [28 Jun 1976] (Cy). BRAZIL: Amazonas: Sastre 1545 (Cy). Maranhão: Lisboa 4 [Herb. Jard. Bot. Rio Jan. 4764] (W--2928663). Mato Grosso: Prance & Schaller 26285 (Ld, N). Pará: Prance, Campbell, Daly, Maciel, Silva, Bahia, & Santos P.26353 (N); Silva 2920 (N). Roraima: Prance, Steward, Ramos, & Farias 9909 (W--2573051A). MOUNTED ILLUSTRATIONS: Lam., Tabl. Encycl. Bot. 1: pl. 50, fig. 3. 1791 (Ld); Meikle & Baldwin, Am. Journ. Bot. 39: 48, fig. 19--27. 1952 (Ld); Mold. in Humbert, Fl. Madag. 36: 31, fig. 4 (8--17). 1955 (Ld).

PAEPALANTHUS LANATO-ALBUS Mart.

Additional bibliography: Mold., Phytologia 30: 38--39. 1975; Mold., Phytol. Mem. 2: 155, 462, & 615. 1980.

PAEPALANTHUS LANATUS Alv. Silv.

Additional bibliography: Mold., Phytologia 30: 39--40 & 115. 1975; Mold., Phytol. Mem. 2: 155 & 615. 1980.

Additional citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., Fl. Mont. 1: 42--43, pl. 21. 1928 (Ld, N, W).

PAEPALANTHUS LANCEOLATUS Körn.

Additional bibliography: Mold., Phytologia 41: 476 & 484. 1979; Mold., Phytol. Mem. 2: 155 & 615. 1980.

Additional citations: BRAZIL: Minas Gerais: Hatschbach & Koczicki 35332 (W--2839431).

PAEPALANTHUS LANGSDORFFII (Bong.) Körn.

Additional bibliography: Mold., Phytologia 37: 47. 1977; Mold., Phytol. Mem. 2: 155, 426, & 615. 1980.

PAEPALANTHUS LANGSDORFFII var. *CARACENSIS* Mold.

Additional bibliography: Mold., Phytologia 37: 47. 1977; Mold., Phytol. Mem. 2: 155, 426, & 615. 1980.

Additional citations: BRAZIL: Minas Gerais: Irwin, Harley, & Onishi 29110 (W--2709887--isotype).

PAEPALANTHUS LATIPES Alv. Silv.

Additional bibliography: Mold., Phytologia 30: 42. 1975; Mold., Phytol. Mem. 2: 155 & 615. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., Fl. Mont. 1: 230--231, pl. 153. 1928 (Ld, N, W).

PAEPALANTHUS LAXIFOLIUS Körn.

Additional bibliography: Mold., Phytologia 37: 47. 1977; Mold., Phytol. Mem. 2: 155 & 615. 1980.

PAEPALANTHUS LEIOTHRICOIDES Alv. Silv.

Additional bibliography: Mold., Phytologia 33: 48. 1976; Mold.,

Phytol. Mem. 2: 155 & 615. 1980.

Additional citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., Fl. Mont. 1: 127--128, pl. 79. 1928 (Ld, N, W).

PAEPALANTHUS LEISERINGII Ruhl.

Additional bibliography: Mold., Phytologia 37: 47. 1977; Mold., Phytol. Mem. 2: 155, 426, & 615. 1980.

PAEPALANTHUS LEISERINGII var. *KLEINII* Mold. & Sm.

Additional bibliography: Mold., Phytologia 37: 47. 1977; Mold., Phytol. Mem. 2: 155 & 615. 1980.

PAEPALANTHUS LEPIDUS Alv. Silv.

Additional bibliography: Mold., Phytologia 33: 48. 1976; Mold., Phytol. Mem. 2: 155 & 615. 1980.

Additional citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., Fl. Serr. Min. 57, pl. 19. 1908 (W); Alv. Silv., Fl. Mont. 1: 241--243, pl. 161. 1928 (Ld, N, W).

PAEPALANTHUS LEUCOBLEPHARUS Körn.

Additional bibliography: Mold., Phytologia 37: 47. 1977; Mold., Phytol. Mem. 2: 155, 426, & 615. 1980.

PAEPALANTHUS LEUCOCEPHALUS Ruhl.

Additional bibliography: Mold., Phytologia 37: 48. 1977; Mold., Phytol. Mem. 2: 155 & 615. 1980.

PAEPALANTHUS LEUCOCYANEUS Tutin

Additional bibliography: Mold., Phytologia 37: 48. 1977; Mold., Phytol. Mem. 2: 122, 124, 155, & 615. 1980; Mold., Phytologia 51: 244. 1982.

Recent collectors have found this plant growing on sunny emergent rocks, in both flower and fruit in July, describing the bracts as brown.

The Irwin, Egler, & Murça Pires 47133, distributed and previously cited by me as typical *P. leucocyaneus*, now is the type collection of its f. *egleri* Mold., while Tillett, Tillett, & Boyan 43997 actually is *P. perplexans* Mold.

Additional & emended citations: GUYANA: Maguire & Fanshawe 23264 (W--1907828); Tutin 481 (W--1743596--isotype). SURINAM: Maguire 24485 (W--1907839), 24750 (W--1907844). FRENCH GUIANA: Granville 2689 (Cy, Ld).

PAEPALANTHUS LEUCOCYANEUS f. *EGLERI* Mold., Phytologia 51: 244. 1982.

Bibliography: Mold., Phytologia 51: 244. 1982.

Collectors describe this plant as an herb. 5--15 cm. tall, with white flower-heads, and have encountered it in wet places, in forests, and locally common in wet places among rocks, at 560 m. altitude, in both flower and fruit in July and August.

Material of this form has been misidentified and distributed in some herbaria as *P. lamarckii* Kunth; Egler 47650 is a mixture

with *Syngonanthus glandulosus* f. *epapillosus* (Mold.) Mold. and *Utricularia* sp.

Citations: FRENCH GUIANA: *Cremers* 7416 (Ld); *Granville* 1409 (Cy); *Oldeman* T.315 (Cy, Ld); *Sastre* 1500 (Cy). BRAZIL: *Amapá*: *Egler* 47650 in part (W--2435286); *Irwin, Egler, & Murça Pires* 47133 (N--type, W--2435090--isotype).

PAEPALANTHUS LILLIPUTIANUS Mold.

Additional bibliography: Mold., *Phytologia* 30: 47. 1975; Mold., *Phytol. Mem.* 2: 122 & 615. 1980.

PAEPALANTHUS LINDENII Ruhl.

Additional bibliography: Mold., *Phytologia* 33: 48. 1976; Mold., *Phytol. Mem.* 2: 110 & 615. 1980.

Additional citations: COLOMBIA: *Boyacá*: *Fosberg* 22242 (W--2109451).

PAEPALANTHUS LINEARIFOLIUS Alv. Silv.

Additional bibliography: Mold., *Phytologia* 30: 48. 1975; Mold., *Phytol. Mem.* 2: 155 & 615. 1980.

Citations: MOUNTED CLIPPINGS: Alv. Silv., *Fl. Mont.* 1: 57--58. 1928 (Ld, N, W).

PAEPALANTHUS LINGULATUS (Bong.) Kunth

Additional bibliography: Mold., *Phytologia* 30: 48--49. 1975; Mold., *Phytol. Mem.* 2: 155, 426, & 615. 1980.

Additional citations: MOUNTED CLIPPINGS: Bong., *Ess. Monog. Erioc.* 26. 1831 (W).

PAEPALANTHUS LODICULOIDES Mold.

Additional bibliography: Mold., *Phytologia* 41: 484. 1979; Mold., *Phytol. Mem.* 2: 110, 117, & 615. 1980; Mold., *Phytologia* 52: 119. 1982.

Recent collectors have described this plant as forming light-green cushions on paramos as well as in open wet sandy areas in banas (white sand areas with shrubs and small trees), from "120" (?) to 4380 m. altitude, in flower in April. It seems most likely that the "120" m. altitude recorded by Liesner is a typographic error made when the labels accompanying his collection were prepared. The species is otherwise known only as a very high altitude denizen.

The *Grubb & al.* 762, previously cited as typical *P. lodiculoides*, actually represented the more recently described var. *floccosus* Mold.

Additional citations: COLOMBIA: *Boyacá*: *Cleef* 4364 (W--2850667), 4418 (W--2850664). *Cundinamarca*: *Cleef* 5439 (W--2050668); *Cuatrecasas & Idrobo* 27032 (W--2613363). VENEZUELA: *Amazonas*: *Liesner* 6925 (Ld).

PAEPALANTHUS LODICULOIDES var. *FLOCCOSUS* Mold.

Additional bibliography: Mold., *Phytologia* 41: 484. 1979; Mold., *Phytol. Mem.* 2: 110 & 615. 1980; Mold., *Phytologia* 52: 119. 1982.

Recent collectors describe this plant as densely tufted, to 20 cm in diameter, the leaves very pale-green, lost in dense silvery tomentum, the bracts dark-brown, the inner ones very dark, all edged with white hairs, and have found it growing on paramos at altitudes of 3720--4380 m.

The Grubb & al. 762, cited below, was previously cited as typical *P. lodiculoides*.

Additional citations: COLOMBIA: Arauca: Grubb, Curry, & Fernandez-Perez 762 (W--2322662). Boyacá: Cleef, Cuatrecasas, & Jaramillo 9214 (W--2789386--isotype & photo of type); Cleef & Florschütz 5550 (W--2850666); Kieft & Becerra C. 139 (N, W--2908177). Cundinamarca: Cuatrecasas & Idrobo 27054 (E--2613376).

PAEPALANTHUS LOEFGRENIANUS Ruhl.

Additional bibliography: Mold., Phytologia 30: 50--51. 1975; Mold., Phytol. Mem. 2: 155 & 615. 1980.

PAEPALANTHUS LOMBENSIS Alv. Silv.

Additional bibliography: Mold., Phytologia 30: 16 & 51. 1975; Mold., Phytol. Mem. 2: 155 & 615. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., Fl. Mont. 1: 180--181, pl. 116. 1928 (Ld, N, W).

PAEPALANTHUS LONGICAULIS Alv. Silv.

Additional bibliography: Mold., Phytologia 37: 48 (1977) and 41: 484. 1979; Mold., Phytol. Mem. 2: 155, 426, & 615. 1980; Mold., Phytologia 53: 367 (1983) and 54: 236 & 243. 1983.

Material of this species has been misidentified and distributed in some herbaria as *P. planifolius* (Bong.) K&rn. Hatschbach encountered it on sandy river margins, in flower in August.

Additional citations: BRAZIL: Minas Gerais: Hatschbach 30189 (W--2705959). MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., Fl. Mont. 1: 236--237, pl. 157. 1928 (Ld, N, W).

PAEPALANTHUS LONGICAULIS var. *GLABER* Mold.

This taxon is now regarded as identical with *P. macrocaulon* var. *glaber* Mold., which see.

PAEPALANTHUS LONGIFOLIUS K&rn.

Additional bibliography: Mold., Phytologia 30: 52--53. 1975; Mold., Phytol. Mem. 2: 155 & 615. 1980.

PAEPALANTHUS LOXENSIS Mold.

Additional bibliography: Mold., Phytologia 30: 53. 1975; Mold., Phytol. Mem. 2: 129 & 615. 1980.

Additional citations: ECUADOR: Loja: Steyermark 54452 (W--1901694--isotype).

PAEPALANTHUS LUNDII K&rn.

Additional bibliography: Mold., Phytologia 37: 48. 1977; Mold., Phytol. Mem. 2: 155 & 615. 1980.

Recent collectors have found this plant growing in wet campos,

describing the flowers as whitish. They have found it in both flower and fruit in October.

Additional citations: BRAZIL: Minas Gerais: *Hatschbach & Kummrow* 45637 (Ld).

PAEPALANTHUS LUTEOLUS Alv. Silv.

Additional bibliography: Mold., *Phytologia* 30: 53--54. 1975; Mold., *Phytol. Mem.* 2: 155 & 615. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 86--88, pl. 52. 1928 (Ld, N, W).

PAEPALANTHUS LÜTZELBURGII Herzog

Additional bibliography: Mold., *Phytologia* 37: 48. 1977; Mold., *Phytol. Mem.* 2: 155, 426, & 615. 1980.

Recent collectors have found this plant growing in the "interior da mata sombria das encostas do morro", at 1150 m. altitude, in both flower and fruit in July.

Additional citations: BRAZIL: Bahia: *Hatschbach & Guimaraes* 42391 (Ld).

PAEPALANTHUS LYCOPODIOIDES Alv. Silv.

Additional bibliography: Mold., *Phytologia* 30: 55. 1975; Mold., *Phytol. Mem.* 2: 155 & 615. 1980.

Additional citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 160--161, pl. 101. 1928 (Ld, N, W).

PAEPALANTHUS MACARENENSIS Mold.

Additional bibliography: Mold., *Phytologia* 30: 55. 1975; Mold., *Phytol. Mem.* 2: 110 & 615. 1980.

Additional citations: COLOMBIA: Magdalena: *Cuatrecasas & Castañeda* 25025 (W--2339383).

PAEPALANTHUS MACROCAULON Alv. Silv.

Additional bibliography: Mold., *Phytologia* 41: 484 (1979) and 45: 38. 1980; Mold., *Phytol. Mem.* 2: 117, 155, & 615. 1980; Mold. in Harley & Mayo, *Toward Checklist Fl. Bahia* 74. 1980; Hocking, *Excerpt. Bot. A.35:* 324 (1980) and *A.36:* 23. 1981.

Hatschbach has encountered this plant on sandy roadsides, in both flower and fruit in July.

Additional citations: BRAZIL: Minas Gerais: *Hatschbach* 41524 (Ld, N). MOUNTED ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: pl. 108 & 109. 1928 (Ld, Ld, N, N).

PAEPALANTHUS MACROCAULON var. *CONTASSENSIS* Mold., *Phytologia* 43: 356. 1979.

Bibliography: Mold., *Phytologia* 43: 356. 1979; Mold., *Phytol. Mem.* 2: 155 & 615. 1980; Mold. in Harley & Mayo, *Toward Checklist Fl. Bahia* 74. 1980; Hocking, *Excerpt. Bot. A.36:* 23. 1981.

Collectors describe this plant as an herb, to 50 cm. tall, with a rosette of rigid mid-green leaves and white flower-heads. They have found it growing in marshes, flowering in March.

Citations: BRAZIL: Bahia: *Harley, Mayo, Storr, Santos, & Pinheiro in Harley 19804* (Ld--isotype, N--isotype, W--2936323--isotype).

PAEPALANTHUS MACROCAULON var. *KINGII* Mold., *Phytologia* 45: 38. 1980.

Bibliography: Hocking, *Excerpt. Bot. A.35*: 324. 1980; Mold., *Phytologia* 45: 38. 1980; Mold., *Phytol. Mem.* 2: 155 & 615. 1980.

Citations: BRAZIL: Bahia: *Mori, King, Santos, & Hage 12478* (Ld--isotype, W--2854256--isotype).

PAEPALANTHUS MACROCAULON var. *VENAMENSIS* Mold.

Additional bibliography: Mold., *Phytologia* 41: 484. 1979; Mold., *Phytol. Mem.* 2: 117 & 615. 1980.

Additional citations: VENEZUELA: Bolívar: *Steyermark, Dunsterville, & Dunsterville 92308* (W--2584521--isotype).

PAEPALANTHUS MACROCEPHALUS (Bong.) K&H.

Additional bibliography: Mold., *Phytologia* 37: 48 (1977) and 41: 485. 1979; Mold., *Phytol. Mem.* 2: 155, 426, & 615. 1980.

PAEPALANTHUS MACROCEPHALUS var. *MINARUM* (K&H.) Ruhl.

Additional bibliography: Mold., *Phytologia* 41: 485. 1979; Mold., *Phytol. Mem.* 2: 155, 426, & 615. 1980.

Additional citations: BRAZIL: Minas Gerais: *Hatschbach 41342* (W--2840050).

PAEPALANTHUS MACROCEPHALUS var. *PACHYPHYLLUS* (K&H.) Ruhl.

Additional bibliography: Mold., *Phytologia* 30: 58--59. 1975; Mold., *Phytol. Mem.* 2: 155 & 615. 1980.

PAEPALANTHUS MACROPODUS Ruhl.

Additional bibliography: Mold., *Phytologia* 33: 49. 1976; Mold., *Phytol. Mem.* 2: 155 & 615. 1980; Mold., *Phytologia* 53: 367 (1983) and 54: 237 & 243. 1983.

PAEPALANTHUS MACROPODUS var. *GLABER* (Mold.) Mold., *Phytologia* 53: 367. 1983.

Synonymy: *Paepalanthus longicaulis* var. *glaber* Mold., *Phytologia* 9: 266. 1963.

Bibliography: Mold., *Phytologia* 9: 266. 1963; Angely, *Fl. Anal. S. Paulo* 6: 1159. 1972; Mold., *Phytologia* 30: 52 (1975), 37: 48 (1977), 41: 484 (1979), 53: 367 (1983), and 54: 236, 237, & 243. 1983.

Mori & Benton found this plant growing in the shade of large rocks on campo rupestre, at 800 m. altitude, in both flower and fruit in December.

Citations: BRAZIL: Bahia: *Mori & Benton 13190* (Ld, N); *Santos 3111* (Ld, N). Minas Gerais: *Héring & Castellanos 6096* (Ld--type); *Irwin, Maxwell, & Wasshausen 20249* (Ld, N, W--2752349); *Tryon & Tryon 6829* (Ac, Ld). São Paulo: *Pabst 4777* (Bd--10932).

PAEPALANTHUS MACRORRHIZUS (Bong.) Kunth

Additional bibliography: Mold., *Phytologia* 41: 485, 1979; Mold., *Phytol. Mem.* 2: 155, 398, & 615, 1980.

Additional citations: BRAZIL: Minas Gerais: *Hatschbach 40811* (N, W--2850674).

PAEPALANTHUS MACROTRICHUS Alv. Silv.

Additional bibliography: Mold., *Phytologia* 33: 49, 1976; Mold., *Phytol. Mem.* 2: 155 & 615, 1980; Mold., *Phytologia* 50: 247 (1982) and 54: 399, 1983.

Recent collectors describe this species as turf-forming, and have encountered it at 1400 m. altitude, in anthesis in March.

Additional citations: BRAZIL: Bahia: *Mori & Benton 13620* (Ld, N). MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., Fl. Serr. Min. 43, 1908 (W); Alv. Silv., Fl. Mont. 1: 69--70, pl. 40, 1928 (Ld, N, W).

PAEPALANTHUS MACROTRICHUS var. *PUBERULUS* Mold., *Phytologia* 54: 399, 1983.

Bibliography: Mold., *Phytologia* 54: 399, 1983.

Citations: BRAZIL: Bahia: *Hatschbach 46496* (Ld--type).

PAEPALANTHUS MACULATUS Alv. Silv.

Additional bibliography: Mold., *Phytologia* 30: 61, 1975; Mold., *Phytol. Mem.* 2: 155 & 615, 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., Fl. Mont. 1: 167--169, pl. 107, 1928 (Ld, N, W).

PAEPALANTHUS MAGALHÃESII Alv. Silv.

Additional bibliography: Mold., *Phytologia* 33: 51, 1976; Mold., *Phytol. Mem.* 2: 155, 426, & 615, 1980.

PAEPALANTHUS MANICATUS V. A. Pouls.

Additional synonymy: *Paepalanthus manicatus* "V. A. Pouls. ex Malme" ex Mold. in Harley & Mayo, *Toward Checklist Fl. Bahia* 74, 1980.

Additional bibliography: Mold., *Phytologia* 41: 485, 1979; Mold., *Phytol. Mem.* 2: 155, 156, 175, 615, & 628, 1980; Mold. in Harley & Mayo, *Toward Checklist Fl. Bahia* 74, 1980; Mold., *Phytologia* 50: 248 & 263 (1982) and 53: 328, 1983.

Recent collectors describe this plant as a tiny herb with rosettes of soft, pale-green leaves, the involucre bractlets brown. They have encountered it "inside horizontal rock crevices in shade of rocks with dripping water in some places" in a region of "rocky riversides with rapids, riverine vegetation, cerrado with sandstone outcrops, and some grassland areas subject to flooding", at 980 m. altitude, in both flower and fruit in March.

Additional citations: BRAZIL: Bahia: *Harley, Mayo, Storr, Santos, & Pinheiro* in *Harley 20104* (Ld, N, W--2936322). Goiás: *Irwin, Grear, Souza, & Santos 13388* (W--2861721). Minas Gerais: *Hatschbach 41290* (N, W--2840103).

PAEPALANTHUS MANICATUS var. *PULCHELLUS* Beauverd

Additional bibliography: Mold., *Phytologia* 30: 74--75. 1975; Mold., *Phytol. Mem.* 2: 156 & 615. 1980.

Citations: MOUNTED CLIPPINGS: Beauverd, *Bull. Herb. Boiss.*, ser. 2, 8: 290. 1908 (W).

PAEPALANTHUS MANICATUS var. *PULVINATUS* Herzog

Additional bibliography: Mold., *Phytologia* 37: 48. 1977; Mold., *Phytol. Mem.* 2: 175 & 615. 1980; Mold., *Phytologia* 50: 248 (1982) and 53: 328. 1983.

Material of this taxon has been misidentified and distributed in some herbaria as *Eriocaulon microcephalum* H.B.K.

Additional citations: BOLIVIA: Santa Cruz: Cutler 7038 (W--2863035).

PAEPALANTHUS MANICATUS f. *ROBUSTUS* Ruhl.

Additional bibliography: Mold., *Phytologia* 30: 75 & 76. 1975; Mold., *Phytol. Mem.* 2: 156 & 615. 1980.

PAEPALANTHUS MARTIANUS Körn.

Additional bibliography: Mold., *Phytologia* 37: 48. 1977; Mold., *Phytol. Mem.* 2: 156 & 615. 1980.

PAEPALANTHUS MELALEUCUS (Bong.) Kunth

Additional bibliography: Mold., *Phytologia* 37: 48. 1977; Mold., *Phytol. Mem.* 2: 156 & 615. 1980.

Additional citations: MOUNTED CLIPPINGS: Bong., *Ess. Monog. Erioc.* 29. 1831 (W); Kunth, *Enum. Pl.* 3: 575. 1841 (W).

PAEPALANTHUS MELANOLEPIS Alv. Silv.

Additional bibliography: Mold., *Phytologia* 33: 51. 1976; Mold., *Phytol. Mem.* 2: 156 & 615. 1980.

PAEPALANTHUS MELANTHUS Alv. Silv.

Additional bibliography: Mold., *Phytologia* 30: 78--79. 1975; Mold., *Phytol. Mem.* 2: 156 & 615. 1980.

Additional citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 74--76, pl. 43 ["63"]. 1928 (Ld, N, W).

PAEPALANTHUS MELLII Mold.

Additional bibliography: Mold., *Phytologia* 30: 79. 1975; Mold., *Phytol. Mem.* 2: 65 & 615. 1980.

Additional citations: MOUNTED CLIPPINGS: Mold., *N. Am. Fl.* 19: 41. 1937 (N, W).

PAEPALANTHUS MENDONCIANUS Ruhl.

Additional bibliography: Mold., *Phytologia* 30: 79. 1975; Mold., *Phytol. Mem.* 2: 156 & 615. 1980.

PAEPALANTHUS MERIDENSIS Klotzsch

Additional bibliography: Knuth, *Feddes Repert. Spec. Nov. Beih.* 43: [Init. Fl. Venez.] 180. 1927; Mold., *Phytologia* 35: 28. 1976;

Mold., Phytol. Mem. 2: 110, 117, & 615. 1980; Mold., Phytologia 54: 149, 233, & 234. 1983.

Recent collectors describe this plant as having white flower-heads and have found it growing in woods and pantamo, as well as subparamo, on brushy hillsides, rocky ridges, ledges, and "in white sand oozing water here and there on paramo slopes". common on grass paramo with *Espeletia brassicoides*, especially abundant in wet seepage areas. They have encountered it at 2600--3200 m. altitude, in flower in October, and in both flower & fruit in November. On Cuatrecasas & al. 28151 all the leaves are quite hirsute on both surfaces, just as they are on the original cotype collections.

Material of this species has been misidentified and distributed in some herbaria as the very similar *P. andicola* Lörn. Knuth (1927) cites only Linden 1415 and Moritz 1212 from Mérida, Venezuela.

Additional citations: COLOMBIA: Norte de Santander: Fosberg 19174 (W--2108097). VENEZUELA: Mérida: Cuatrecasas, Ruiz-Terán, & López-Figueiras 28151 (W--2585778A). Táchira: Luteyn, Lebrón-Luteyn, & Ruiz-Terán 5885 (N), (N). Trujillo: Cuatrecasas, Ruiz-Terán, & López-Figueiras 28236 (W--2585810).

PAEPALANTHUS MESETICOLA Mold. & Steyerl.

Additional bibliography: Mold., Phytologia 41: 485. 1979; Mold., Phytol. Mem. 2: 117 & 615. 1980.

Steyerl and his associates refer to this plant as having the leaves pale-green and subcoriaceous and have found it growing in wet ground at 2580--2600 m. altitude, in both flower and fruit in January, March, and April.

Material of this species has been misidentified and distributed in some herbaria as *Leiothrix turbinata* Gleason.

Additional citations: VENEZUELA: Amazonas: Steyerl & Delascio 129249 (Ld); Steyerl, Guariglia, Holmgren, Luteyn, & Mori 125893 (Ld), 125911 (Ld), 125924 (Ld). Bolívar: Steyerl, Espinoza, & Brewer-Carias 109389 (W--2813878--isotype). MOUNTED ILLUSTRATIONS: Steyerl & Brewer-Carias, Bol. Soc. Venez. Cienc. Nat. 132/133: [282], fig. 3. 1967 (Ld).

PAEPALANTHUS MEXIAE Mold.

Additional bibliography: Mold., Phytologia 37: 48. 1977; Angely, S. Amer. Bot. Bibl. 2: 674. 1980; Mold., Phytol. Mem. 2: 156 & 616. 1980.

PAEPALANTHUS MICHAELII Alv. Silv.

Additional bibliography: Mold., Phytologia 33: 51. 1976; Mold., Phytol. Mem. 2: 156 & 616. 1980.

Additional citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., Fl. Mont. 1: 39--40, pl. 19. 1928 (Ld, N, W).

PAEPALANTHUS MICROCAULON Ruhl.

Additional bibliography: Mold., Phytologia 41: 485. 1979; Monteiro, Giuliatti, Mazzoni, & Castro, Bol. Bot. Univ. S. Paulo 7:

44. 1979; Mold., Phytol. Mem. 2: 156 & 616. 1980.

PAEPALANTHUS MICROPHORUS Alv. Silv.

Additional bibliography: Mold., Phytologia 30: 82. 1975; Mold., Phytol. Mem. 2: 156 & 616. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., Fl. Mont. 1: 149--151, pl. 94. 1928 (Ld, N, W).

PAEPALANTHUS MICROPHYLLUS (Guill.) Kunth

Additional bibliography: Mold., Phytologia 30: 82--83. 1975; Mold., Phytol. Mem. 2: 156 & 616. 1980.

PAEPALANTHUS MILHO-VERDENSIS Alv. Silv.

Additional bibliography: Mold., Phytologia 30: 83--84. 1975; Mold., Phytol. Mem. 2: 156, 426, & 616. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., Fl. Mont. 1: 131--132, pl. 82. 1928 (Ld, N, W).

PAEPALANTHUS MINASENSIS Mold.

Additional bibliography: Mold., Phytologia 30: 84. 1975; Mold., Phytol. Mem. 2: 156 & 616. 1980.

PAEPALANTHUS MINIMUS Alv. Silv.

Additional bibliography: Mold., Phytologia 30: 84. 1975; Mold., Phytol. Mem. 2: 156 & 616. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., Fl. Mont. 1: 107--108, pl. 66. 1928 (Ld, N, W).

PAEPALANTHUS MINUTULUS Mart.

Additional bibliography: Mold., Phytologia 30: 84--85. 1975; Mold., Phytol. Mem. 2: 156 & 616. 1980.

PAEPALANTHUS MINUTUS Mold.

Additional bibliography: Mold., Phytologia 30: 86. 1975; Mold., Phytol. Mem. 2: 117 & 616. 1980.

PAEPALANTHUS MISER Ruhl.

Additional bibliography: Mold., Phytologia 30: 86. 1975; Mold., Phytol. Mem. 2: 156 & 616. 1980.

PAEPALANTHUS MOEDENSIS Alv. Silv.

Additional bibliography: Mold., Phytologia 30: 86--87. 1975; Mold., Phytol. Mem. 2: 156 & 616. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., Fl. Mont. 1: 234--236, pl. 156. 1928 (Ld, N, W).

PAEPALANTHUS MOLDENKEANUS R. E. Schultes

Additional bibliography: Mold., Phytologia 41: 485. 1979; Mold., Phytol. Mem. 2: 110 & 616. 1980.

Additional citations: COLOMBIA: Vaupés: Zarucchi 2020 (W--2832331).

PAEPALANTHUS MONTANUS Alv. Silv.

Additional bibliography: Mold., *Phytologia* 30: 88. 1975; Mold., *Phytol. Mem.* 2: 156 & 616. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 76--77, pl. 44. 1928 (Ld, N, W).

PAEPALANTHUS MULTICOSTATUS Ruhl.

Additional bibliography: Mold., *Phytologia* 30: 88--89. 1975; Mold., *Phytol. Mem.* 2: 156 & 616. 1980.

PAEPALANTHUS MUSCOSUS Körn.

Additional bibliography: Mold., *Phytologia* 41: 483 & 485. (1979) and 42: 29. 1979; Mold., *Phytol. Mem.* 2: 110, 117, 129, & 616. 1980; Hocking, *Excerpt. Bot.* A.36: 222. 1981.

The Boeke 803 and Pennell 2256 distributed and previously cited as *P. muscosus*, actually are *P. karstenii* f. *corei* Mold.

PAEPALANTHUS MUSCOSUS var. *TACHIRENSIS* Mold.

Additional bibliography: Mold., *Phytologia* 30: 90. 1975; Mold., *Phytol. Mem.* 2: 117 & 616. 1980.

Recent collectors describe this plant as an herb, the "infructescence gray, pale-brown at base", and have encountered it on a subparamo with very wet rocks, at 2250--2880 m. altitude, in flower in January.

Additional citations: VENEZUELA: Táchira: Maas & Tillett 5282 (Ld); Steyermark, Dunsterville, & Dunsterville 101056 (N).

PAEPALANTHUS MYOCEPHALUS (Mart.) Körn.

Additional bibliography: Mold., *Phytologia* 37: 43 & 49. 1977; Mold., *Phytol. Mem.* 2: 156, 402, 404, & 616. 1980.

Recent collectors have found this plant growing in sandy soil of disturbed woods, in both flower and fruit in September.

Additional citations: BRAZIL: Bahia: (Ld).

PAEPALANTHUS MYOCEPHALUS var. *MINOR* Körn.

Additional bibliography: Mold., *Phytologia* 30: 92--93 (1975) and 35: 125. 1977; Mold., *Phytol. Mem.* 2: 156 & 616. 1980.

PAEPALANTHUS MYRIOPHYLLUS Alv. Silv.

Additional bibliography: Mold., *Phytologia* 30: 93--94 & 341. 1975; Mold., *Phytol. Mem.* 2: 156, 426, & 616. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 147--148, pl. 93. 1928 (Ld, N, W).

PAEPALANTHUS NANUS Alv. Silv.

Additional bibliography: Mold., *Phytologia* 30: 94. 1975; Mold., *Phytol. Mem.* 2: 156 & 616. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 52--53, pl. 28, fig. 2. 1928 (Ld, N, W).

PAEPALANTHUS NEGLECTUS Körn.

Additional bibliography: Mold., *Phytologia* 33: 33, 52, 53, & 144. 1976; Mold., *Phytol. Mem.* 2: 156 & 616. 1980; Mold. in Harley & Mayo, *Toward Checklist Fl. Bahia* 74. 1980.

Recent collectors have found this plant growing in sandy and wet sandy soil and wet places in general, from sealevel to 20 m. altitude, in both flower and fruit in January and August. Harley and his associates describe it as a small tufted herb, 10--15 cm. tall, growing singly or in groups. The leaves pale-green, the inflorescence heads white or black with white tomentum, the involucre bracts gray or white-hairy, and encountered it "in open areas normally wet in a region of restinga with scattered shrubs" and in white sand on campos.

Additional citations: BRAZIL: Bahia: Brito & Vinha 70 (Ld); Carvalho & Lewis 932 (Ld); Harley, Mayo, Storr, Santos, & Pinheiro in Harley 17961 (Ld, N, W--2936340), 18123 (Ld, N, W--2936330); Mori, Mattos Silva, Kallunki, Santos, & Pereira dos Santos 9607 (Ld), 9669 (Ld); Mori, Mattos Silva, & Santos 10505 (Ld).

PAEPALANTHUS NEOCALDENSIENSIS Mold.

Additional bibliography: Mold., *Phytologia* 30: 95. 1975; Angely, *S. Amer. Bot. Bibl.* 2: 669. 1980; Mold., *Phytol. Mem.* 2: 156 & 616. 1980.

Additional citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 186--187, pl. 120. 1928 (Ld, N, W).

PAEPALANTHUS NEOPULVINATUS Mold.

Additional bibliography: Mold., *Phytologia* 30: 95--96. 1975; Angely, *S. Amer. Bot. Bibl.* 2: 669. 1980; Mold., *Phytol. Mem.* 2: 156 & 616. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 37--39, pl. 18. 1928 (Ld, N, W).

PAEPALANTHUS NIGRESCENS Alv. Silv.

Additional bibliography: Mold., *Phytologia* 33: 52. 1976; Mold., *Phytol. Mem.* 2: 156, 426, & 616. 1980.

Additional citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 266--268, pl. 177. 1928 (Ld, N, W).

PAEPALANTHUS NIGRESCENS var. *PILOSUS* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 33: 52. 1976; Mold., *Phytol. Mem.* 2: 156, 426, & 616. 1980.

Citations: MOUNTED CLIPPINGS: Alv. Silv., *Fl. Serr. Min.* 63. 1908 (W).

PAEPALANTHUS NIGRICANS Alv. Silv.

Additional bibliography: Mold., *Phytologia* 33: 52. 1976; Mold., *Phytol. Mem.* 2: 156 & 616. 1980; Mold. in Harley & Mayo, *Toward Checklist Fl. Bahia* 75. 1980; Mold., *Phytologia* 50: 248. 1982.

Recent collectors have encountered this plant growing in seepage areas on granitic outcrops and on campo rupestre, at 400--1000 m.

altitude, in flower in February and March.

Additional citations: BRAZIL: Bahia: Morí & Benton 13569 (Ld, N).
Goíás: Plowman, Davidse, Rosa, Rosário, & Santos 8280 (Ld). MOUNTED
CLIPPINGS & ILLUSTRATIONS: *Alv. Silv.*, *Fl. Mont.* 1: 89--91, pl.
54, fig. 2. 1928 (Ld, N, W).

PAEPALANTHUS NIGRICAULIS *Alv. Silv.*

Additional bibliography: Mold., *Phytologia* 30: 97. 1975; Mold.,
Phytol. Mem. 2: 156 & 616. 1980.

Additional citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: *Alv.*
Silv. Fl. Mont. 1: 88--89, pl. 53. 1928 (Ld, N, W).

PAEPALANTHUS NIGRIFLORUS *Alv. Silv.*

Additional bibliography: Mold., *Phytologia* 30: 97--98. 1975;
Mold., *Phytol. Mem.* 2: 156 & 616. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: *Alv. Silv.*, *Fl.*
Mont. 1: 25--27, pl. 10. 1928 (Ld, N, W).

PAEPALANTHUS NIVEO-NIGER *Alv. Silv.*

Additional bibliography: Mold., *Phytologia* 30: 98. 1975; Mold.,
Phytol. Mem. 2: 156, 426, & 616. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: *Alv. Silv.*, *Fl.*
Mont. 1: 246--247, pl. 164. 1928 (Ld, N, W).

PAEPALANTHUS NODIFER *Alv. Silv.*

Additional bibliography: Mold., *Phytologia* 30: 98. 1975;
Mold., *Phytol. Mem.* 2: 156 & 616. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: *Alv. Silv.*, *Fl.*
Mont. 1: 212--213, pl. 141. 1928 (Ld, N, W).

PAEPALANTHUS NUDUS *Alv. Silv.*

Additional bibliography: Mold., *Phytologia* 30: 98--99 (1975)
and 33: 191. 1976; Mold., *Phytol. Mem.* 2: 156 & 616. 1980.

Additional citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: *Alv.*
Silv., *Fl. Mont.* 1: 215--217, pl. 143. 1928 (Ld, N, W).

PAEPALANTHUS OBCONICUS *Alv. Silv.*

Additional bibliography: Mold., *Phytologia* 30: 99. 1975; Mold.,
Phytol. Mem. 2: 156 & 616. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: *Alv. Silv.*, *Fl.*
Mont. 1: 111--112, pl. 69. 1928 (Ld, N, W).

PAEPALANTHUS OBTUSIFOLIUS (Steud.) K&rn.

Additional bibliography: Mold., *Phytologia* 33: 52--53 (1976)
and 35: 125. 1977; Mold., *Phytol. Mem.* 2: 156, 426, & 616. 1980;
Mold. in Harley & May, *Toward Checklist Fl. Bahia* 75. 1980.

Recent collectors have encountered this plant on riversides,
in sandy soil of campo rupestre, at the margins of corrego, in
"marshes in a region of rocky riversides with rapids, riverine
vegetation, cerrado with sandstone outcrops, and some grassland
areas subject to flooding", and in areas of closed cerrado and

adjoining grassland and marsh, at 850--1300 m. altitude, in both. flower and fruit in March and July, also in flower in May.

Additional citations: BRAZIL: Bahia: *Harley, Mayo, Storr, Santos, & Pinheiro in Harley 19812 (K), 20122 (K); Harley, Renvoize, Erskine, Brighton, & Pinheiro in Harley 15275 (W--2771331); Hatschbach 46485 (Ld); Hatschbach & Guimaraes 42440 (Ld).*

PAEPALANTHUS OCHROCEPHALUS Körn.

Additional bibliography: *Mold., Phytologia 37: 49. 1977; Mold., Phytol. Mem. 2: Phytol. Mem. 2: 156 & 616. 1980.*

PAEPALANTHUS OCREATUS Alv. Silv.

Additional bibliography: *Mold., Phytologia 30: 101 (1975) and 35: 259. 1977; Mold., Phytol. Mem. 2: 156 & 616. 1980.*

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: *Alv. Silv., Fl. Mont. 1: 165--166, pl. 105. 1928 (Ld, N, W).*

PAEPALANTHUS OERSTEDIANUS Körn.

Additional bibliography: *Mold., Phytologia 30: 101--102 (1975) and 35: 283. 1977; Mold., Phytol. Mem. 2: 156 & 616. 1980.*

PAEPALANTHUS OLIGOCEPHALUS Körn.

Additional bibliography: *Mold., Phytologia 30: 102--103. 1975; Mold., Phytol. Mem. 2: 110 & 616. 1980.*

PAEPALANTHUS OLIVEIRAE Ruhl.

Additional bibliography: *Mold., Phytologia 30: 103. 1975; Mold., Phytol. Mem. 2: 156 & 616. 1980.*

PAEPALANTHUS ORTHOBLEPHARUS Alv. Silv.

Additional bibliography: *Mold. Phytologia 30: 103. 1975; Mold., Phytol. Mem. 2: 156 & 616. 1980.*

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: *Alv. Silv., Fl. Mont. 1: 62--63, pl. 35. 1928 (Ld, N, W).*

PAEPALANTHUS ORTHOGONALIS Alv. Silv.

Additional bibliography: *Mold., Phytologia 30: 104. 1975; Mold., Phytol. Mem. 2: 156 & 616. 1980.*

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: *Alv. Silv., Fl. Mont. 1: 85--86, pl. 51. 1928 (Ld, N, W).*

PAEPALANTHUS OVATUS Körn.

Additional bibliography: *Mold., Phytologia 35: 28 (1976) and 35: 117, 255, 256, & 359. 1977; Monteiro, Giulietti, Mazzoni, & Castro, Bol. Bot. Univ. S. Paulo 7: 44. 1979; Mold., Phytol. Mem. 2: 156 & 616. 1980.*

Additional citations: BRAZIL: Rio de Janeiro: *G. Gardner 5901 (W--1067078--isotype).*

PAEPALANTHUS OXYPHYLLUS Körn.

Additional bibliography: *Mold., Phytologia 37: 49. 1977; Mold., Phytol. Mem. 2: 156 & 616. 1980.*

PAEPALANTHUS OYAPOCKENSIS Herzog

Additional bibliography: Mold., *Phytologia* 37: 49. 1977; Mold., *Phytol. Mem.* 2: 124, 156, 428, & 616. 1980.

Rosa & Santos describe this plant as an herb, to 20 cm. tall, with the inflorescence "cinze, esbranquicada" and have found it in flower and fruit in May.

Material of this species has been misidentified and distributed in some herbaria as *Syngonanthus* sp.

Additional citations: BRAZIL: Mato Grosso: Rosa & Santos 1980 (N).

PAEPALANTHUS PALLIDUS Alv. Silv.

Additional bibliography: Mold., *Phytologia* 33: 53. 1976; Mold., *Phytol. Mem.* 2: 156 & 616. 1980.

Additional citations: BRAZIL: Minas Gerais: Anderson, Stieber, & Kirkbride 35819 (W--2709597). MOUNTED ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: pl. 33. 1928 (Ld, N).

PAEPALANTHUS PARALLELINERVIUS Alv. Silv.

Additional bibliography: Mold., *Phytologia* 30: 108. 1975; Mold., *Phytol. Mem.* 2: 156 & 616. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATION: Alv. Silv., *Fl. Mont.* 1: 65--66, pl. 37. 1928 (Ld, N, W).

"PAEPALANTHUS PARAMENSIS Körn."

Additional bibliography: Mold., *Phytologia* 30: 108. 1975; Mold., *Phytol. Mem.* 2: 368 & 616. 1980.

PAEPALANTHUS PARAMENSIS Mold.

Additional bibliography: Mold., *Phytologia* 33: 53--54. 1976; Mold., *Phytol. Mem.* 2: 110, 134, & 616. 1980.

PAEPALANTHUS PARVIFOLIUS Alv. Silv.

Additional bibliography: Mold., *Phytologia* 30: 109. 1975; Mold., *Phytol. Mem.* 2: 156 & 616. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 91--92, pl. 55. 1928 (Ld, N, W).

PAEPALANTHUS PARVUS Ruhl.

Additional bibliography: Mold., *Phytologia* 42: 29. 1979; Mold., *Phytol. Mem.* 2: 156 & 616. 1980; Mold. in Harley & Mayo, *Toward Checklist Fl. Bahia* 75. 1980.

Recent collectors describe this plant as a delicate, slender herb, a few to 10 cm. tall, with a rosette of spreading to erect pale-green leaves, spreading culms [=peduncles], the involucre bractlets stramineous, the inflorescence heads pale-brown, and the florets "off-white". They have found it growing in marshes in a region of sandstone, metamorphic, and quartzite rock outcrops with associated marshes and damp flushes, at 1500 m. altitude, in flower in February and March.

Additional citations: BRAZIL: Bahia: Harley, Mayo, Storr, Santos, & Pinheiro in Harley 19557 (Ld, N, W--2936334) 19779 (Ld, N,

W--2936320).

PAEPALANTHUS PAUCIFLORUS Kbrn.

Additional bibliography: Mold., *Phytologia* 33: 48 & 54 (1976) and 35: 279. 1977; Mold., *Phytol. Mem.* 2: 157 & 616. 1980.

PAEPALANTHUS PAUCIFLORUS var. *GLAZIOVII* Ruhl.

Additional bibliography: Mold., *Phytologia* 30: 111. 1975; Mold., *Phytol. Mem.* 2: 157 & 616. 1980.

PAEPALANTHUS PAULENSIS Ruhl.

Additional bibliography: Mold., *Phytologia* 30: 111--112. 1975; Mold., *Phytol. Mem.* 2: 157 & 616. 1980.

PAEPALANTHUS PAULINUS Ruhl.

Additional bibliography: Mold., *Phytologia* 37: 49--50. 1977; Mold., *Phytol. Mem.* 2: 157 & 616. 1980.

PAEPALANTHUS PAUPER Mold.

Additional bibliography: Mold., *Phytologia* 30: 112--113. 1975; Mold., *Phytol. Mem.* 2: 117, 122, & 616. 1980.

Liesner describes this plant as forming cushions on white sand and encountered it at 120 m. altitude, in fruit in April.

Additional citations: VENEZUELA: Amazonas: *O. Huber 2685* (Ve); *Liesner 7034* (Ld).

PAEPALANTHUS PAUPERRIMUS Herzog

Synonymy: *Paepalanthus pauperrimus* Mold., *Phytol. Mem.* 2: 617 sphalm. 1980.

Additional bibliography: Mold., *Phytologia* 33: 54. 1976; Mold., *Phytol. Mem.* 2: 157, 428, & 617. 1980; Mold., *Phytologia* 50: 245, 263, & 270 (1982) and 54: 233. 1983.

Recent collectors have found this plant growing in water on sand savannas with a quartzite base and savannas in general, at 80--330 m. altitude, in flower in April.

The Schultes & Cabrera collections, cited below, were previously incorrectly cited by me as *P. polytrichoides* Kunth.

Additional citations: COLOMBIA: Vaupés: *Schultes & Cabrera 19129* (Ss, W--2198914), *19185* (Ss, W--2198917). VENEZUELA: Amazonas: *Maas & Huber 5137* (Ba).

PAEPALANTHUS PEDUNCULATUS (Bong.) Ruhl.

Additional bibliography: Mold., *Phytologia* 42: 29. 1979; Mold., *Phytol. Mem.* 2: 157, 425, 427, & 617. 1980.

Additional citations: BRAZIL: Minas Gerais: *G. Gardner 5284* (W--1067058); *Hatschbach 40925* (W--2850780); *L. B. Smith 6839* (W--2120200). MOUNTED CLIPPINGS: Bong., *Mem. Acad. Sci. St.-Pétersb.*, ser. 6, 1: 183. 1831 (W); Kunth, *Enum. Pl.* 3: 576. 1841 (W).

PAEPALANTHUS PENDULUS Mold.

Additional bibliography: Mold., *Phytologia* 30: 115. 1975; Mold.,

Phytol. Mem. 2: 117 & 617. 1980.

The *Steyermark & al. 115920*, distributed as *P. pendulus*, appears, instead, to be *P. perplexans* Mold.

Additional citations: VENEZUELA: Bolívar: *Maguire 33538a* (W--2168913--isotype).

PAEPALANTHUS PERBRACCHIATUS Alv. Silv.

Additional bibliography: Mold., *Phytologia* 30: 116. 1975; Mold., *Phytol. Mem.* 2: 157 & 617. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 137--139, pl. 86. 1928 (Ld, N, W).

PAEPALANTHUS PERCRASSUS Alv. Silv.

Additional bibliography: Mold., *Phytologia* 30: 116. 1975; Mold., *Phytol. Mem.* 2: 157 & 617. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 214--215, pl. 152. 1928 (Ld, N, W).

PAEPALANTHUS PERPLEXANS Mold.

Additional bibliography: Mold., *Phytologia* 37: 50 (1977) and 44: 384. 1979; Mold., *Phytol. Mem.* 2: 117, 122, & 617. 1980; Mold., *Phytologia* 54: 273. 1983.

Recent collectors have found this plant growing in forests, at 1140--2740 m. altitude, in both flower and fruit in January, February, July, and September. Tillett and his associates refer to it as "frequent on sand and rocks of streambeds". Steyermark and his associates comment that the leaves are "green above".

Material of this species has been misidentified and distributed (and in some cases previously cited by me) as the very closely related and similar *P. fraternus* N. E. Br., *P. leucocyaneus* Tutin, and *P. pendulus* Mold.

Additional citations: VENEZUELA: Amazonas: *Steyermark, Guariglia, Holmgren, Luteyn, & Mori 125896* (Ld), 126324 (Ld). Bolívar: *Steyermark 58849* (F--1209392, N, W--1987395), 59748 (W--1901795--isotype); *Steyermark, Espinosa, McDiarmid, & Brewer-Carías 115920* (Ld); *Steyermark & Nilsson 352* (W--2400129, W--2486663); *Steyermark & Wurdack 750* (W--2168523), 764 (W--2407727). GUYANA: *Tillett, Tillett, & Boyan 43997* (Ld, N).

PAEPALANTHUS PERPLEXANS var. *STEYERMARKII* Mold., *Phytologia* 44: 384. 1979.

Bibliography: Mold., *Phytologia* 44: 384. 1979; Mold., *Phytol. Mem.* 2: 117 & 617. 1980.

Collectors describe this plant as having silvery-green leaves [in distinction from the typical form with its "green" leaves], the flowering-heads white "with black involucre". They have found it growing in dense tufts bordering rocks and on open rocky plateaus, at 2360--2420 m. altitude, in both flower and fruit in February. Steyermark comments on the label accompanying *Steyermark & al. 115690* "n. sp. aff. *perplexans* and *cumbri-cola* but upper leaf-surface appressed-silvery; =115715".

Citations: VENEZUELA: Bolívar: Steyermark, Espinosa, McDiarmid, & Brewer-Carías 115640 (Ld--type), 115690 (Ld), 115715 (Ld).

PAEPALANTHUS PERPLEXANS var. *WURDACKI* Mold.

Additional bibliography: Mold., *Phytologia* 30: 117. 1975; Mold., *Phytol. Mem.* 2: 117 & 617. 1980.

Steyermark & Nilsson describe this plant as having subcoriaceous leaves, rich deep-green above, paler beneath, black involucres, with the rest of the inflorescence-head dull-white "with brown-black". They have found it growing on moist stretches of sandy alluvium and forming dense colonies on sandstone bluffs at the base of waterfall spray, at 11--=1200 m. altitude, in both flower and fruit in April. It has previously been confused with typical *P. perplexans* Mold.

Citations: VENEZUELA: Amazonas: Cowan & Wurdack 31141 (W--2046526--isotype). Bolívar: Steyermark & Nilsson 440 (M1, N, W--2400065), 722 (W--2400111, W--2486643); wurdack 34275 (W--2168926).

PAEPALANTHUS PERPUSILLUS Kunth

Additional bibliography: Mold., *Phytologia* 42: 29. 1979; Mold., *Phytol. Mem.* 2: 117, 157, 172, 183, & 617. 1980; Mold., *Phytologia* 50: 245. 1982.

Maas & Tillett have encountered this plant at 2250 m. altitude.

Additional citations: VENEZUELA: Táchira: Maas & Tillett 5283 (Ba).

PAEPALANTHUS PETRAEUS Körn.

Additional bibliography: Mold., *Phytologia* 33: 54. 1976; Mold., *Phytol. Mem.* 2: 110 & 617. 1980.

Additional citations: COLOMBIA: Cundinamarca: Haught 5775 (W--1709805).

PAEPALANTHUS PHAEOCEPHALUS Ruhl.

Additional bibliography: Hocking, *Excerpt. Bot. A.* 23: 388. 1974; Mold., *Phytologia* 42: 29. 1979; Mold., *Phytol. Mem.* 2: 157 & 617. 1980.

Recent collectors describe this plant as growing to 50 cm. tall, with white inflorescences, and have encountered it in sandy soil of campo rupestre, in both flower and fruit in March.

Additional citations: BRAZIL: Goiás: W. R. Anderson 6610 (W--2755482); Duarte 10709 (Mu); Irwin, Harley, & Smith 32154 (W--2709586); Oliveira & Anderson 493 (N).

PAEPALANTHUS PHAEOCEPHALUS var. *FOLIOSUS* Mold.

Additional bibliography: Hocking, *Excerpt. Bot. A.* 23: 388. 1974; Mold., *Phytologia* 33: 54. 1976; Mold., *Phytol. Mem.* 2: 157 & 6;7. 1980.

PAEPALANTHUS PHELPSAE Mold.

Additional bibliography: Mold., *Phytologia* 42: 30. 1979; Mold., *Phytol. Mem.* 2: 117, 427, & 617. 1980.

Steyermark and his associates found this plant growing at 2020 m.

altitude, in both flower and fruit in February.

Additional citations: VENEZUELA: Bolívar: Steyermark, Brewer-Carías, & Liesner 124310 (E--2901866).

PAEPALANTHUS PILIFER (Bong.) Kunth

Additional & emended bibliography: Bong., Mem. Acad. Imp. Sci. St.-Petersb., ser. 6, 1: 631--632. 1831; Mold., Phytologia 30: 121--122. 1975; Mold., Phytol. Mem. 2: 157 & 617. 1980.

Additional citations: BRAZIL: Minas Gerais: Hatschbach 40919 (N, W--2850779). MOUNTED CLIPPINGS: Bong., Ess. Monog. Erioc. 31--32. 1831 (N, W); Kunth, Enum. Pl. 3: 524--525 & 577. 1841 (N, W).

PAEPALANTHUS PILOSUS (H.B.K.) Kunth

Additional synonymy: *Eriocaulon dendroide* H. B. & K. ex Bedevian, Illust. Polyglot. Dict. 260. 1936. *Paepalanthus dentroides* (H.B.K.) Kunth ex Mold., Phytologia 52: 128 in syn. 1982.

Pipalanthus pilosus (H.B.K.) Kunth, in herb.

Additional bibliography: Bedevian, Illust. Polyglot. Dict. 260. 1936. Mold., Phytologia 42: 30. 1979; Mold., Phytol. Mem. 2: 110, 117, 134, 401, & 617. 1980; Mold., Phytologia 52: 119. 1982.

Bedevian (1936) lists the following vernacular names for this species: "bürdi", "eckenhalm", "joncinelle", and "pipewort", but it is most probable that he intended these as names for the members of the genus [and family] as a whole.

Stuessy & Funk report the species locally abundant in wet meadows, at 3330 m. altitude, in both flower and fruit in July.

The Steyermark 55727, distributed and previously cited as *P. pilosus*, actually is *P. karstenii* f. *corei* (Mold.) Mold.

Additional citations: COLOMBIA: Antioquia: Barkley 18A146 (W--1999316). Cundinamarca: Core 5 (W--2105122); Pennell 1997 (W--1042045); R. E. Schultes 18788 (W--21989090). Putumayo: Ewan 16369 (W--2106125). Santander: Araque Molina & Barkley 18S351 (W--1999456); Stuessy & Funk 5612 (Mi). MOUNTED CLIPPINGS & ILLUSTRATIONS: Anon., pl. 2, fig. 1--6 (Ba); Benth., Pl. Hartw. 260. 1839 (W); Kunth, Enum. Pl. 3: 506--507. 1841 (N, W).

PAEPALANTHUS PIRESI Mold.

Additional bibliography: Galvão & Cavalcante, Bol. Mus. Para. Goeldi, ser. 2 Bot. Ind. 15. 1975; Mold., Phytologia 30: 251--252. 1975; Hocking, Excerpt. Bot. A.35: 324. 1980; Mold., Phytologia 45: 38. 1980; Mold., Phytol. Mem. 2: 157, 427, & 617. 1980.

PAEPALANTHUS PIRESI var. *VILLOSUS* Mold., Phytologia 45: 38. 1980.

Bibliography: Hocking, Excerpt. Bot. A.35: 324. 1980; Mold., Phytologia 45: 38. 1980; Mold., Phytol. Mem. 2: 157 & 617. 1980.

Citations: BRAZIL: Pará: Murça Pires 16097 (Id--isotype, N--isotype).

PAEPALANTHUS PLAGIOSTIGMA Alv. Silv.

Additional bibliography: Mold., Phytologia 30: 252. 1975; Mold., Phytol. Mem. 2: 157 & 617. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., Fl. Mont. 1: 117--118, pl. 73. 1928 (Ld, N, W).

PAEPALANTHUS PLANIFOLIUS (Bong.) Krn.

Additional synonymy: *Paepalanthus planifolius* Bong. apud Ruhl. in Wettstein, Denkschr. K. Akad. Wiss. Wien Math.-nat. 79: 87. 1908.

Additional bibliography: Ruhl. in Wettstein, Denkschr. K. Akad. Wiss. Wien Math.-nat. 79: 87. 1908; Klein, Sellowia 31: 132. 1979; Mold., Phytologia 42: 30. 1979; Monteiro, Giuliatti, Mazzoni, & Castro, Bol. Bot. Univ. S. Paulo 7: [43], 45, 46, 52, & 57, fig. 57--62. 1979; Angely, S. Amer. Bot. Bibl.]: 679. 1980; Mold., Phytol. Mem. 2: 110, 134, 157, 178, 357, 401, 402, 404, 425, 427, & 617. 1980; Mold., Phytologia 53: 475 (1983) and 54: 148. 1983.

Additional illustrations: Monteiro, Giuliatti, Mazzoni, & Castro, Bol. Bot. Univ. S. Paulo 7: 57, fig. 57--62. 1979.

Recent collectors refer to this plant as rhizomatous and have encountered it in brejo, in flower in February.

The *Smith, Reitz, & Klein 7959*, cited by me in a previous installment of these notes as typical *P. planifolius*, actually represents its var. *globulifer* (Alv. Silv.) Mold. & Sm., while *Hatschbach 30189* is *P. longicaulis* Alv. Silv.

Additional & emended citations: BRAZIL: Minas Gerais: *Krapovickas & Cristbal 33492* (Ld); *Maguire, Mendes Magalhes, & Maguire 49145* (W--2435287), *49300* (W--2435324); *Widgren s.n.* [1845] (N). So Paulo: *Fosberg 43330* (W--2724073). PARAGUAY: *Casas & Molero FC.3827* (N). MOUNTED CLIPPINGS: Kunth, Enum. Pl. 3: 502. 1841 (N, W).

PAEPALANTHUS PLANIFOLIUS var. *ALPESTRIS* Krn.

Additional bibliography: Mold., Phytologia 30: 255, 257, & 260. 1975; Mold., Phytol. Mem. 2: 110, 157, 427, & 617. 1980; Mold., Phytologia 54: 148. 1983.

The *Killip 34148*, previously cited by me as *P. planifolius* var. *alpestris*, actually is *P. andicola* Krn.

Additional citations: COLOMBIA: Antioquia: *Araque Molina & Barkley 18A020* (W--1999296); *Valderrama V. & Barkley 18A119* (W--1999309).

PAEPALANTHUS PLANIFOLIUS var. *CONDPLICATUS* Ruhl.

Additional bibliography: Mold., Phytologia 42: 30. 1979; Mold., Phytol. Mem. 2: 157, 427, & 617. 1980.

PAEPALANTHUS PLANIFOLIUS var. *CONSANGUINEUS* (Krn.) Ruhl.

Additional bibliography: Mold., Phytologia 35: 29. 1976; Mold., Phytol. Mem. 2: 157, 425, 427, & 617. 1980.

PAEPALANTHUS PLANIFOLIUS var. *GLOBULIFER* (Alv. Silv.) Mold. & Sm.

Additional bibliography: Mold., Phytologia 42: 30. 1979; Angely, S. Amer. Bot. Bibl. 2: 679. 1980; Mold., Phytol. Mem. 2:

157, 425, & 617. 1980.

Recent collectors describe this plant as frequent on dry campos, the inflorescence-heads white, and have found it in both flower and fruit in January.

The Smith, Reitz, & Klein 7959, cited below, was previously incorrectly cited as typical *P. planifolius* (Bong.) Körn.

Additional citations: BRAZIL: Minas Gerais: Hatschbach, Smith, & Ayensu 28870 (W--2653340); Irwin, Maxwell, & Wasshausen 20184 (W--2569049A); Maguire, Mendes Magalhães, & Maguire 49092 (W--2435299). Paraná: Gottsberger & Poelt s.n. [21.7.1979] (Gr--196-80). Rio de Janeiro: Occhioni 8696 (Ld). Santa Catarina: Reitz & Klein 5376 (W--2258994), 10060 (N); Smith, Reitz, & Klein 7959 (Ok, W--2251330). MOUNTED ILLUSTRATIONS: Alv. Silv., Fl. Mont. 1: pl. 160. 1928 (Ld, N).

PAEPALANTHUS PLANIFOLIUS var. *PUBERULUS* (Körn.) Ruhl.

Additional synonymy: *Paepalanthus planifolius* var. *puberula* Körn. apud Ruhl. in Wettstein, Denkschr. K. Akad. Wiss. Wien Math.-nat. 79: 87. 1908.

Additional bibliography: Ruhl. in Wettstein, Denkschr. K. Akad. Wiss. Wien Math.-nat. 79: 87. 1908; Mold., Phytologia 37: 51. 1977; Mold., Phytol. Mem. 2: 157, 427, & 617. 1980.

Wettstein collected this plant at 1800 m. altitude.

PAEPALANTHUS PLANIFOLIUS var. *VILLOSUS* Mold.

Additional bibliography: Mold., Phytologia 42: 30. 1979; Mold., Phytol. Mem. 2: 157 & 617. 1980.

Additional citations: BRAZIL: São Paulo: Fosberg 43331 (W--2724079).

PAEPALANTHUS PLANTAGINEUS (Bong.) Körn.

Additional bibliography: Mold., Phytologia 37: 44 & 51. 1977; Mold., Phytol. Mem. 2: 157, 427, & 617. 1980.

Additional citations: MOUNTED CLIPPINGS: Kunth, Enum. Pl. 3: 504 & 572. 1841 (N, W); Steud., Syn. Pl. Glum. 2: [Cyp.] 277. 1855 (N, W).

PAEPALANTHUS PLANTAGINEUS f. *LUXURIANS* Beauverd

Additional bibliography: Mold., Phytologia 30: 264--265. 1975; Mold., Phytol. Mem. 2: 157 & 617. 1980.

Citations: MOUNTED CLIPPINGS: Beauverd, Bull. Herb. Boiss., ser. 2, 8: 287. 1908 (N, W).

PAEPALANTHUS PLANTAGINIOIDES (Desv.) Körn.

Additional bibliography: Mold., Phytologia 30: 265--266. 1975; Mold., Phytol. Mem. 2: 122, 298, 402, 403, 427, & 617. 1980.

Citations: MOUNTED CLIPPINGS: W. Hamilt., Prodr. Ind. Occ. 16. 1825 (W); Kunth, Enum. Pl. 3: 572. 1841 (N, W).

PAEPALANTHUS PLATYCAULIS Alv. Silv.

Additional bibliography: Mold., Phytologia 30: 266. 1975; Mold., Phytol. Mem. 2: 157 & 617. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., Fl. Mont. 1: 27--28, pl. 11. 1928 (Ld, N, W).

PAEPALANTHUS PLUMIPES Alv. Silv.

Additional bibliography: Mold., Phytologia 37: 51. 1977; Mold., Phytol. Mem. 2: 157 & 617. 1980.

Additional citations: BRAZIL: Minas Gerais: Irwin, Maxwell, & Wasshausen 20031 in part (W--2598328); Maguire, Maguire, & Murga Pires 44706a (Ld, N, N); L. B. Smith 6834 (W--2120208). MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., Fl. Mont. 1: 201--203, pl. 133. 1928 (Ld, N, W).

PAEPALANTHUS PLUMOSUS (Bong.) Körn.

Additional synonymy: *Paepalanthus plumosus* (Bong.) Ruhl. ex Mold., Phytologia 54: 243 in syn. 1983.

Additional bibliography: Mold., Phytologia 33: 56. 1976; Mold., Phytol. Mem. 2: 157, 427, & 617. 1980; Mold., Phytologia 54: 243. 1983.

Additional citations: MOUNTED CLIPPINGS: Bong., Ess. Monog. Erioc. 32. 1831 (N, W); Kunth, Enum. Pl. 3: 577. 1841 (N, W).

PAEPALANTHUS POLYANDRUS Alv. Silv.

Additional bibliography: Mold., Phytologia 30: 271. 1975; Mold., Phytol. Mem. 2: 157 & 617. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., Fl. Mont. 1: 140--142, pl. 88. 1928 (Ld, N, W).

PAEPALANTHUS POLYANTHUS (Bong.) Kunth

Additional synonymy: *Paepalanthus polyanthus* Bong. apud Ruhl. in Wettstein, Denkschr. K. Akad. Wiss. Wien Math.-nat. 79: 87. 1908. *Paepalanthus potyanthus* Angely, S. Am. Bot. Bibl. 2: 678 sphalm. 1980.

Additional bibliography: Ruhl. in Wettstein, Denkschr. K. Akad. Wiss. Wien Math.-nat. 79: 87. 1908; Domin, Ann. Jard. Bot. Buitenz. 24 [ser. 2, 9]: 247. 1911; Arber, Bot. Gaz. 74: 84. 1922; Mold., Phytologia 42: 31. 1979; Rizzini, Trat. Fitogeog. Bras. 2: 208. 1979; Angely, S. Amer. Bot. Bibl. 2: 678. 1980; Mold., Phytol. Mem. 2: 157, 427, 428, & 617. 1980; Mold., Phytologia 54: 243. 1983.

Recent collectors have found this plant growing at 1160--2500 m. altitude, describing it as not monocarpic, erect on a caudex to 3 dm. long and 5 cm. thick, the inflorescence axillary and terminal, in flower in January. King & Bishop note that their 2 collections, cited below, were growing "in association with no. 8494 and 8495", the leaves seen on their no. 8497 were taken from a non-flowering plant. Wettstein collected the species on the border of Minas Gerais and Rio de Janeiro.

Additional citations: BRAZIL: Minas Gerais: Irwin, Harley, & Onishi 30388 (W--2709308); Irwin, Maxwell, & Wasshausen 20662 (W--2598434); Irwin, Santos, Souza, & Fonséca 22026 (W--2582562A); King & Bishop 8496 (W--2908915), 8497 (W--2908916). Paraná: Reitz & Klein 17478 (W--2548355); Smith, Klein, & Hatschbach

14441 (W--2573037). Rio de Janeiro: Casari 9 [Herb. FEEMA 15056] (Ld). Santa Catarina: Reitz 4687 [Herb. Reitz 4738] (W--2141746, W--2971132); Smith & Reitz 8630 (W--2251418, W--2251419), 10072 (W--2251644). MOUNTED CLIPPINGS & ILLUSTRATIONS: Kunth, Enum. Pl. 3: 572. 1841 (N, W); Mold. & Sm. in Reitz, Fl. Ilust. Catar. I Erioc. 59, pl. 7. 1976 (Ld).

PAEPALANTHUS POLYANTHUS var. *TOMENTOSUS* Alv. Silv.

Additional bibliography: Mold., Phytologia 35: 30. 1976; Mold., Phytol. Mem. 2: 157, 428, & 617. 1980.

Citations: MOUNTED CLIPPINGS: Alv. Silv., Fl. Mont. 1: 222. 1928 (N, W).

PAEPALANTHUS POLYANTHUS f. *VILLOSUS* (Beauverd) Mold. & Sm.

Additional synonymy: *Paepalanthus potyanthus* var. *villosus* Angely, S. Amer. Bot. Bibl. 2: 678 sphalm. 1980.

Additional bibliography: Mold., Phytologia 42: 31. 1979; Angely, S. Amer. Bot. Bibl. 2: 678. 1980; Mold., Phytol. Mem. 2: 157, 427, & 617. 1980; Mold., Phytologia 54: 243. 1983.

PAEPALANTHUS POLYCLADUS Alv. Silv.

Additional bibliography: Mold., Phytologia 30: 278. 1975; Mold., Phytol. Mem. 2: 157 & 617. 1980.

Hatschbach describes this plant as producing inflorescences to 1 m. tall, and found it growing in rocky soil of campo rupestre, in both flower and fruit in May.

Citations: BRAZIL: Bahia: Hatschbach 46652 (Ld). MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., Fl. Mont. 1: 189--190, pl. 122--124. 1928 (Ld, N, W).

PAEPALANTHUS POLYGONUS Körn.

Additional bibliography: Mold., Phytologia 30: 278--279. 1975; Mold., Phytol. Mem. 2: 157 & 617. 1980.

Recent collectors have encountered this curious plant at 3800 feet altitude, in both flower and fruit in December.

Additional citations: BRAZIL: Minas Gerais: Maguire & Maguire 44747 (N, N, N).

PAEPALANTHUS POLYTRICHOIDES Kunth

Additional synonymy: *Paepalanthus polytrichoides* Benth. ex Mold., Phytologia 54: 243 in syn. 1983.

Additional bibliography: Mold., Phytologia 42: 31, 34, & 205. 1979; Mold., Phytol. Mem. 2: 110, 117, 122, 129, 134, 157, 172, 427, & 617. 1980; Øllgaard & Balslev, Rep. Bot. Inst. Univ. Aarhus 4: 97. 1980; Mold., Phytologia 50: 245 (1982) and 54: 235, 237, & 243. 1983.

Recent collectors describe this plant as growing to 15 cm. tall, with grayish inflorescences, and have encountered it on open campos, savannas, and white-sand campinas, in marshes and wet caatinga, in small dense mats on white sand banks, and "cortada por diversos igarapés", at 90 m. altitude, in both flower and fruit in May and October.

[to be continued]